Applicants: Andreas Bibl et al. Attorney Docket No.: 09991-150001

Serial No.: 10/749,816

Filed: December 30, 2003

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AMENDMENTS TO THE SPECIFICATION:

Please replace the paragraph beginning at page 5, line 8 with the following amended paragraph:

--Referring to Fig. 3, two portions 90, 90' of a nozzle plate include two adjacent nozzle openings 94, 94' as illustrated. Each of the portions 90, 90' includes a field of projections surrounding the nozzle opening. The fields are bordered by void regions 114, 115 and 117 and waste channels 119, 122. Channels 119, 122 include drain apertures 121. The pattern of the projections diverts ink away from the nozzles and toward the channels. When the nozzle plate is oriented horizontally (nozzle opening upward or downward), waste ink puddles initially move in all possible directions from projection-to-projection under the influence of capillary action, including the four general directions 112, 116, 118 and 120. Once waste ink reaches void region 114, 115 or 117, movement of waste ink is retarded in that direction since the spacing between projections 96 is too great for capillary forces to continue to move waste ink in that direction. The movement of waste ink continues until encountering channels 119,122, which catch waste ink. In embodiments, apertures 121 are maintained under reduced pressure, e.g., by communication with a mechanical vacuum apparatus (not shown) to draw the waste ink from each channel. Alternatively, the apertures can be filled with a wicking material, e.g., a foamed polyurethane or other absorbent material, to remove waste ink from each channel 119. In embodiments, the ratio of the projection height to projection width is from about 0.2 to about 1 or greater, e.g. about 5 or greater. When the nozzle plate is oriented vertically, waste ink moves from projection-to-projection under the influence of gravity and capillary action, macroscopically in a single direction 112, 116, 118 or 120, depending upon the orientation of nozzle plate 110. Suitable channels are described in U.S. Serial ———10/749,833, filed - [Attorney Docket No. 09991-151001] December 30, 2003, now U.S. Published Patent Application No. 20050140747, and suitable apertures are described in U.S. Serial -10/749,829, filed ———— [Attorney Docket No. 09991-148001] December 30, 2003, now

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<u>U.S. Published Patent Application No. 20050146569</u>, the entire disclosure of each is hereby incorporated by reference herein.--

Please replace the paragraph beginning at page 7, line 12 with the following amended paragraph:

--Referring now to Fig. 4, nozzle plate portion 120 includes a nozzle opening 126 disposed in a well 124 and is surrounded by projections 125 in the form of cylindrical posts proximate nozzle opening 126. Projections 125 to symmetrically spread waste ink within the well. Over time, well 124 partially fills with jetting fluid to form a meniscus over the nozzle opening. The use of a well to facilitate the jetting of fluids is described in an application entitled "DROP EJECTION ASSEMBLY" filed concurrently herewith and assigned U.S. Serial Number [Attorney Docket No. 09991-147001]10/749,622, now U.S. Published Patent Application No. 20050146560, the disclosure of which is hereby incorporated in full by reference.--

Please replace the paragraph beginning at page 8, line 27 with the following amended paragraph:

--The projections can be used in combination with other waste fluid control features such as apertures described in U.S. Serial _______10/749,829, filed ______[Attorney Docket No. 09991_148001]December 30, 2003, now U.S. Published Patent Application No. 20050146569, wells as described in U.S. Serial _______10/749,622, filed ______[Attorney Docket No. 09991_147001]December 30, 2003, now U.S. Published Patent Application No. 20050146560 and/or channels as described in U.S. Serial _______10/749,833, filed ______[Attorney Docket No. 09991_151001]December 30, 2003, now U.S. Published Patent Application No. 20050140747.

For example, a series of channels can be included on the nozzle face proximate the projections. The cleaning structures can be combined with a manual or automatic washing and wiping system

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in which a cleaning fluid is applied to the nozzle plate and wiped clean. The cleaning structures can collect cleaning fluid and debris rather than jetted waste ink .--